



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,101	07/14/2003	Ravi Baliga	AESI121487	8597
26389	7590	06/02/2004	EXAMINER	
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347				PALABRICA, RICARDO J
ART UNIT		PAPER NUMBER		
				3641

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/620,101	BALIGA ET AL.
	Examiner Rick Palabrica	Art Unit 3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 29 March 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 2-13 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 2-13 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. Applicant's 3/29/04 Amendment, which cancels claim 1 and adds new claims 2-13, is acknowledged.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The new subject matter pertains to the limitations in claims 2 and 8, of the missile shield assembly having shield plates retained in an array directly over the reactor closure vessel head and directly over the control rod drive mechanisms, respectively.

The term "directly over" means there is no intervening structure between the recited elements. To the contrary, the specification recites there is at least one intervening structure, i.e., the seismic support system that is disposed between the missile shield

and the vessel head and also between the missile shield and the control rod drive mechanism (e.g., see page 18, lines 16+ and page 19, lines 14+, of the specification).

3. Claims 2-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is neither an adequate description nor enabling disclosure as to how and in what manner the limitations discussed in section 2 above is achieved in the claimed invention.

4. Claims 2-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague and indefinite and their metes and bounds cannot be determined for the reason given in section 3 above.

The addition of the word "type" in claim 2 extends the scope of the expression as to render it indefinite. See MPEP 2173.05(b) and *Ex parte Copenhaver*, 109 USPQ 118 (Bd. App. 1955). Likewise the phrase "of the type" is indefinite because it is unclear what "type" is intended to convey.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine

the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “directly over” in claims 2 and 8 is used by the claims to mean “having at least one intervening structure between two recited elements”, while the accepted meaning is “having no intervening structures between elements.” The term is indefinite because the specification does not clearly redefine the term.

Claim 8 recites the limitation of a plurality of shield plates “directly over the control rod drive mechanisms.” This limitation is vague and indefinite because: a) there is no proper antecedent basis for said mechanisms (a missile shield is a totally different structure with a completely different function from a control rod mechanism); b) it is unclear from the claim language whether the control rod mechanisms are being claimed in addition to the shield plates.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ference et al. (U.S. 4,050,986), who discloses a nuclear reactor that includes structure that

reads on applicant's missile shield assembly and acts as a shield for missiles generated from within and outside the pressure vessel (e.g., see Figs. 1 and 2).

Applicant's claim language reads on Ference's reactor as follows: a) "missile shield assembly with a plurality of shield plates slidably retained in a horizontal array" reads on plugs 51, 53 and 55 that are form a horizontal array (note that these plugs are "slidably retained", i.e. one plug slides from another plug in a rotational manner without loss of their horizontal configuration; b) "reactor vessel closure head" reads on the structure at the that surrounds columns 75 at the upper internals region (see Fig. 1A); c) "slotted beams" read on risers 57, 61 and 65, said risers support the plugs; c) "shield plug handle" reads on the vertical extension of each plug, said extension facilitating attachment of a plug to an riser via a bearing (e.g., see elements 51, 59 and 57 in Fig. 1A); d) "work platform" reads on the top surface of concrete containment with ledge 49; "seismic support assembly" reads on upper internals 77 that assure alignment of the control system under seismic conditions (see column 10, lines 1+); e) "shroud assembly support by ring beam" reads on thermal liner 33; f) "ring beam" reads on structure 185 (see Fig. 1B); g) "lift rods" read on the vertical extension of liner 33 above the structure that surrounds columns 75 (see Fig. 1A); h) "fans" read on the plurality of ventilation system fans that are inherently present in a nuclear reactor and provides cooling for components, including the pressure vessel (note that the preamble of claim 2 does not specify how the different elements recited therein are interconnected, and this configuration of the fans is not precluded).

The claims are replete with statements that are either essentially method limitations or statements of intended or desired use. For example, "for a nuclear reactor having a reactor vessel head with a plurality of lifting lugs" (see claim 2), "for a nuclear reactor, the nuclear reactor including a reactor vessel closure head that supports a plurality of control rod drive mechanisms," etc. These clauses, as well as other statements of intended use do not serve to patently distinguish the claimed structure over that of the reference, as long as the structure of the cited references is capable of performing the intended use. See MPEP 2111-2115.

See also MPEP 2114 that states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531.

[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525,1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

The system in the cited reference is capable of being used in the same manner and for the intended or desired use as the claimed invention.

As to the limitation in claim 8 of the missile shield plates being "directly over the control rod drive mechanism", this feature is considered a statement of intended use

because the control rod drive mechanism is not recited as a positive element of the missile shield but instead part of an intended use statement in the preamble.

As to the limitations “removable frame member” in claims 6 and 12, and “shield plates individually removable” in claims 7 and 13, the applied art meets these limitations because any structure or part thereof can be removed, e.g., by torch cutting, etc.

For the benefit of the applicant, references B and C disclose elements similar to Ference et al. and therefore qualify also as prior art.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

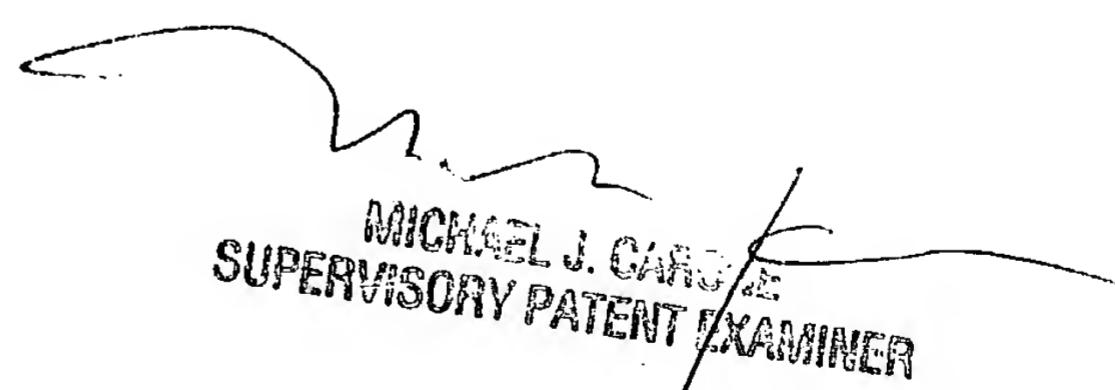
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 7:00-4:30, Mon-Fri; 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJP  
May 26, 2004

  
MICHAEL J. CARONE  
SUPERVISORY PATENT EXAMINER